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SCARLET FEVER;

SUGGESTIONS CONCERNING ITS TREATMENT.

BY ✓

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SCARLET FEVER; SUGGESTIONS CONCERNING ITS TREATMENT.¹

It is doubtful whether there is any marked difference in the aggregate of professional experience regarding the symptoms and phases of scarlet fever. It is probable, on the other hand, that there is a wide difference in our individual opinions and preferences as regards the remedial measures required in the management of this formidable disease. In a general sense, our respective views may not differ very widely, but our individual experiences have, doubtless, a great range in various and often opposite directions. Nothing is easier, for example, than to place an illusory value upon a great variety of incongruous details. This is nothing new in the history of medical practice; neither does it, in this experimental era of our profession, indicate any disregard of scientific accuracy, or of a lack of generosity in our respective views as practitioners.

In that form of scarlet fever which has no more gravity of character than the "simple fever" of Fordyce, or the "ephemera" of many writers, differences of opinion are not of es-

¹ Read before the Medical Library and Journal Association, May 30, 1873.

sential importance. Such cases are not greatly dependent upon any special treatment for their recovery. Scarlet fever, however, has types and phases of a profound and serious nature. It is when treating these conditions that we find ourselves dealing with a formidable, subtle, and treacherous malady. Not a little aid, in the treatment of this disease, is derived from the prompt recognition of certain fairly well-defined analogies between the symptoms presented and the characteristic prevailing conditions of disorders of some other class or order. When scarlatina assumes the anginose form, an apt analogy is created between it and the *cynanche maligna*, the virulent element being supplied by the specific poison of the fever. The occasional diphtheritic features of the disease, under these circumstances, give weight to this impression. When scarlet fever assumes the congestive or *cerebro-meningeal* form, the analogy is readily apparent between that and the grave toxic conditions and physico-mental derangements pertaining to *phrenitis*, or perhaps to *cerebro-spinal meningitis*. When scarlatina assumes the adynamic type, the analogy is formulated between it and a *typhous fever*, so modified, however, as to create no purer likeness to *typhus* than to *typhoid*. It might be called a compromise between the two varieties of this miasmatico-neuropathic disease, generically termed *typhous*. The rule, in the very grave cases of scarlet fever, is, to present a combination of these analogous conditions, or at least a series of them in rapid succession.

If this argument is not open to definitive contradiction, it rationally follows that our best clew to the treatment of scarlet fever is obtained by observing the course of successful treatment in these associative or analogous conditions in other diseases, in which such conditions are of primary origin and of initial importance.

There is so little in scarlet fever, except its pathognomonic rash and its thermometric cycle, that is strictly characteristic and independent of these imitations, that it might almost be termed the *borrowing* disease. Its mild cases resemble quite closely and characteristically the mild ephemeral fevers, both as regards symptoms and the requirements of treatment. Its grave cases present less of a consanguineous relation to scarla-

tina than to other malignant and well-individualized diseases. It is not proposed, in this paper, to follow out the whole train of thought suggested by these analogies. We can, however, without jeopardizing our argument, take up a single phase of scarlet fever and apply our views.

Notwithstanding its marked analogies, which conditions bear so distinctly upon treatment, it is not the less scarlet fever, let it be disguised at first and complicated afterward never so much. A vein of treatment of an antidotal or anti-miasmatic type must run steadily through the whole of the medical course adopted. The scarlatina-poison must be eliminated, and, from first to last, there must be medicines exhibited or measures devised to effect this particular object. It is always in the earlier stages of the disease that the course just indicated will have its greatest efficacy, for, under the exalted excitement of the systemic energies in the fierce contention with the invading poison, the most advisable, even if at times the most heroic, measures can be adopted without overtasking the vital powers under the double stress of poison and potent remedy. Besides, if successful, we have wellnigh expelled the poison by the time the superexcited energies have exhausted themselves, and we have also saved a measure of strength in favor of recuperations, whatever the subsequent complications.

After recognizing the disease, which it is commonly not difficult to do, especially if there is an epidemic prevalence, and if we have attended to the preliminary signs, we address ourselves to the work of coöperating with Nature in ridding the system as rapidly as possible of the specific poison. The partial suspension of the function of the skin is a prominent difficulty in all eruptive fevers, but more in scarlet fever than in any other form, excepting, perhaps, the confluent form of small-pox. Much the same must be said of the kidneys, the secernent action being especially diminished in scarlet fever, though notably so in any form of pyrexia.

Here, then, is our first indication for treatment, looking toward the elimination of the special poison.

The skin, kidneys, and secreting glandular system, must each be stimulated and excited to action, and that both speedily and copiously. Simultaneously, then, with the invasion

and remedial treatment of the fever, we must begin the course which will expel the poison by correcting the perverse action or stimulating the suppressed action of the excretory organs. There is great difficulty in the management of this stage, and the probable cause of such difficulty is, that the symptoms indicate high arterial action, but the scarlatina miasm is very depressing, and the powers of life often sink, even without artificial reduction of strength. Some physicians let the arterial action have its full sway, for fear of subsequent exhaustion; others check the first advances of the disease, and take their chances of succeeding debility. For reasons already indicated, I incline to the latter course. The physician must discriminate carefully between oppression and prostration. This distinction is all the more important for those who espouse the views herein expressed, as the latter can never require evacuates. The first essay, then, of the practitioner must be the tranquillizing of the arterial excitement, and the next the restoration and maintenance of the action of the skin, together with the support of the functional activity of the kidneys and the secreting glands. Very much depends upon our success in the first measure indicated, toward the acquisition of success in the others mentioned. The subduing of the arterial hypersthenia is doubtless, therefore, of essential importance. In this stage, which corresponds with a stage of preliminary high arterial excitement in typhoid fever, the depletive or reducing course is urgently demanded.

That depletion must be by means nearly as prompt, and quite as effectual, as by bloodletting, is, I judge, a self-evident proposition. We have no lack of sound support for the desirability of bloodletting in the beginning of typhoid fever. Dr. Jackson approves conditionally and generally. Chomel likewise approves conditionally. Louis favors under no very restrictive conditions. Bouillaud favors even to the liberal measure implied by the term "*coup-sur-coup*." If the cautionary conditions suggested by such authors as have been named were observed, in the early stages of scarlatina maligna, *in the adult*, actual bloodletting might not be inadmissible. In children, bloodletting cannot be demanded with a view to produce the desired impression, i. e., reduction of arterial force.

Other depletive agencies, less ultimately exhausting, though not the less promptly repressive, should be sought for and employed.

Tartar-emetic is the ready and safe substitute for blood-letting. This certainly is the case in typhoid fever at the outset, according to the views expressed by Withering (the apostle of the tartar-emetic treatment), also by Dr. Nathan Smith, and Delaroque. Louis is rather non-committal on the subject of tartar-emetic, and Gregory condemns its use.

Tartar-emetic, like sulphate of quinine, depends, for its therapeutic efficacy, upon the manner in which it is used. It is potent for good or for evil, according to the mode in which it is exhibited. Without discussing this point further, I will venture to recommend a febrifuge which, upon the strength of a considerable experience, has proved perfectly satisfactory. In this period of high exacerbation of arterial function characterizing the febrile invasion of scarlatina, I have almost invariably used a compound fever-powder composed of potassio-tartrate of antimony, nitrate of potassa, and pulverized ipecacuanha-root, in proportion as follows: Emetic-tartar, half a grain; potassa nitras, thirty grains; ipecac., six and a half grains; making a total of thirty-seven grains, to be divided into twelve powders. This will make each powder weigh three grains and a twelfth. Each powder has one twenty-fourth grain of tartrate of antimony. The average dose would be one of these powders, or three grains and a fraction, repeated with, at first, an hour interval, next two hours' interval, and, if still further repeated, from two to three hour intervals. The sedative effect is expected to be, and almost always is, immediate. I have scarcely ever had to give more than four of these powders, which is my usual allowance.

I will not attempt to analyze the action of this excellent febrifuge-powder, but will say that the combination indicated seems essential. No modification of the combination has answered the purpose at all. It is tolerated by the stomach in even much larger doses. Vomiting is not expected, and nausea to any degree to excite distress is not the common result. Nevertheless, its action upon the pulse and the temperature ought to be watched, and its use discontinued when each has

moderated to a degree beyond which further reduction will be spontaneous and certain. Aconite is often used in the precise conditions in which I use this fever-powder, but seldom with like effect, so far as my experience goes; neither has veratrum given the same prompt results. Both aconite and veratrum have excited nausea and vomiting, which added greatly to the discomfort of the patient, and did not abate the fever to a degree commensurate with the reputation of these remedies as potent revulsives whenever exhibited. I think that, under any circumstances, i. e., as regards after-possibilities in the progress of the disease, these powders are permissible, in the stage of active fever, as a safe and prompt revulsive. Their action sooner determines what kind of case we have to deal with, and, by promptly arresting, as it does, the preternatural exaltation of the arterial system, a large measure of strength is saved with which to do battle with the scarlatina-poison in any other of its manifestations. With this particular medicine there is commonly a favorable reaction produced upon the skin and kidneys, which seems not alone dependent upon the tranquillization of the arterial circulation. A specially purgative action is excited, which will be manifest by any special examinations made of the perspiration and the urine.

This very stage of active febrile excitement, when especially excessive, as I have lately seen it to be in two cases, wherein the pulse became nearly dicrotous, and the self-registering thermometer indicated, after application in the axilla, 107 in one case, and 105½ in the other, in children three and five years of age respectively, is favorable for some vigorous action, *auxiliary* to the tartar-emetic course, as suggested. This action is the ice-water plunge-bath and the ice-water pack. In extreme cases of exceptionally high and persistent fever, I should not hesitate to employ the ice-cold plunge, immersion to be for a few seconds only, and followed at once by the cold-water pack. Though never having, as yet, been obliged to resort to this hydropathic measure, I am sure that it would be most grateful to the patients, and almost instantly be followed by some evidences of abatement of the fever. I feel very confident that this means would not only effectually and promptly diminish the violence of the fever, but also ren-

der the system susceptible to the action of other remedial agents which would sustain the good work commenced by the ice-water.

The extraction of heat by the application of cold is a recognized principle in practice, and the extraction of superfluous heat, by the application of a heat-absorbing agent of any description, would not violate the principle. Through my friend Dr. James R. Leaming I have been made acquainted with the wonderful heat-absorbing properties of *theobroma* (cocoa-butter). I do not venture too much when I say that, for its refrigerant action in fevers of the major kind, it is an agent cognate to ice-water. Its application must be frequent and lavish all over the cutaneous surface. It is absorbed so rapidly that a considerable time is required to so modify the general surface heat that any of it will remain upon the skin, thereby showing (when that is accomplished) the skin to have become, for the time being, supersaturated. The effect upon the patient is agreeable beyond expression, and I hope to see it supersede all other forms of inunction. That tossing violence of unrest and distress is at once measurably decreased. The temptation to constant repetition of this inunction is only restrained by the salutary fear that the interior caloric is not diminishing synchronously with that of the surface. That it should is more than desirable. This butter of cocoa has the rare advantage of being a valuable nutrient. Its liberal absorption by the skin is equivalent to a fair share of food taken into the stomach, and normally assimilated. During the desquamative stage it far surpasses lard or oils, being neither so disagreeably unctuous nor offensive to the smell. Indeed, the odor of the body after its use is positively agreeable. It always retains its massive form, ready to be laid aside like a piece of fragrant soap when, for the time being, no longer needed, and its application is, to the nurse, almost a pastime.

During the period of intensest febrile excitement, it is quite right to adopt a sort of *coup-sur-coup* course, so to speak, with this agent, as heat must be withdrawn as rapidly as possible for the comfort and welfare of the patient. Once an hour is as often as I have ever applied it, though it might be used oftener with benefit in some cases, and once every three

or four hours is the minimum frequency where it is needed at all. I see no reason why, for similar conditions in other diseases, this admirable, pleasantly-flavored, heat-absorbing agent may not be used with great advantage.

Cold to the head must not be overlooked. In a child it cannot be applied in the same direct and comparatively unguarded manner as can be done in the adult.

I have found it sufficient, and more than *tolerable* (being *positively agreeable*), to have pounded ice enclosed in a bladder, and either laid or suspended near the vertex. The air, for many inches around the ice-bag, will be several degrees cooler than the prevailing temperature of the apartment. This can be borne for an indefinite period of time, as it is not attended with the shock ordinarily produced by other more direct applications of intense cold. The shifting and changing, so frequently required by other methods, to the great disturbance of the highly-excited or morbidly-conscious patient, are, by this method, quite done away with. On the small iron cots or cribs of the nursery, I have often hung the half-loaded ice-bag, within a few inches of the crown of the head, and induced thereby an undisturbed sleep for as much as an hour or more at a time. This refreshment has a value which we can all readily appreciate in the delirious or semi-delirious subject. Such practical matters relating to the management of the disease, in this stage of high vascular excitement and perturbation, may be more or less fully rehearsed at any subsequent period, calling for the resumption of measures similar to those adopted at the first. A relapse of the fever is as successfully treated by the means herein indicated as it is at the beginning, and for many reasons often the whole array of measures, such as are here suggested, are urgently demanded. For rapid reduction of abnormal temperature, I know of no better or more acceptable means.

After these exceptionally high and persistent fevers, there is often, if not commonly, ushered in that state which we have found trending toward the typhus condition. This tendency will be apparent often long before the preternatural exaltation of temperature has subsided. This fact will call for a cessation of tartar-emetic compound powder, and the substitution

of a sustaining and blood-purifying medicine. We have tempered, if not cut short, the high, raging, febrile period, but this will inevitably be succeeded by a period of low and destructive febrile action, if not met with proper opposing remedies. In modifying, if not abridging the high fever, with its rapidly-exhausting effects, we have preserved a measure of constitutional strength and vigor, which, of itself, will materially modify the succeeding stage, and that favorably; but we have the elemental poison of scarlatina, as yet, practically unopposed. We now grapple with that in earnest, though we may have incidentally attempted something in that direction from the first, in addition to our anti-febrile efforts.

Under this division of our subject, I do not presume to offer any new or exceptionally valuable *medicine* for your consideration; but there is one agent which I shall urge upon your notice with all the earnestness of conviction, feeling that it may soon and justly come to be regarded as the sheet-anchor in the treatment of scarlet fever. I refer to oxygen gas. Its use, *ad libitum*, has undoubtedly saved the lives of several of my patients, and among these two of my own children. Before, however, referring more specifically to that wonderful recuperative agent, oxygen gas, let us consider briefly what I am much disposed to regard as sub-agents of the same general character. These, of course, include medicines (both depurative and tonic), diet, and pure air.

Medicines.—As early as possible after the recognition of the disease, and before the fever has attained the extreme of violence, I have derived much satisfaction from the beneficent action of the *hyposulphite of soda*. My friend Dr. M. J. Moses has a formula to which I commonly resort:

R. Soda hyposulphite, grs. lxiv.

Syr. tolu, ℥j.

Aq. cinnamomi, ℥ iij. M.

Sig. A teaspoonful every two hours. (Two grains of soda hyposulphite in each dose.)

In certain other forms of disease, I consider the hyposulphite of soda as possessing almost the qualities of a prophylactic when employed in time. It is certainly actively eliminative. It is not intended to supersede the fever-powder at

any time. They are to be taken conjointly, and at alternate intervals, which will not cause mutual interference.

Where we have diphtheritic involvement, I have found much satisfaction in the use of what was suggested by Dr. A. Jacobi:

R. Acid. carbolic. solut., gtt. x.
 Chlorate sodæ, 3 ij.
 Aq. distil., 3 iv. M.

Sig. Teaspoonful.

As an agent in the prompt elimination of the poison, and as a general tonic and sustaining medicine, I have a formula suggested by Dr. James R. Leaming, and slightly modified by myself:

R. Ammon. murias,
 Potass. chloras, aa 3 j.
 Ext. bellad. (English), gr. ss.
 Tinct. ferri mur., 3 j.
 Aq. cinnam.,
 Aqua, aa 3 ij. M.

Dose, from thirty to sixty drops, repeated every two or three hours.

This medicine, or some essentially similar preparation, cannot be dispensed with throughout the entire course of the disease, even long after the fever, as an objective symptom, has disappeared. It both neutralizes and expels the specific poison, and gives Nature a chance to rally on the basis of her own and other judiciously-supplied resources.

In the matter of inunction, I would call your attention to a mixture which seems to have the property of preserving the caloric to a degree not much inferior to that possessed by the butter of cocoa in the direction of its withdrawal. It is of importance to have such a preparation, for there are times when the sudden sinking and exhaustion of the vital powers necessitate the substitution of calorifics for refrigerants. This can only be a temporary condition at any time during the active progress of the disease, but during early periods of invalescence it is often the case that the temperature runs down to a point requiring some prompt and special efforts to induce reaction, and I have found the following formula of great value:

R. Ol. olivæ,
 Glycerine puræ, āā ℥ ijss.
 Solut. carbolic acid, gtt. x.
 Ess. rose-geranium, gtt. xx. M.

Ft. lotio.

As a liniment for the throat and chest, as occasion requires, I commonly use the camphorated oil and oil of turpentine in equal proportions, applying the same with cotton-batting and oiled silk.

It not unfrequently becomes necessary to take some measure for restraining the undue action of the bowels. Among the many medicines in ordinary use, I find the tannic acid in mucilage of gum-acaciæ, in proportion of eight grains to the ounce, the most uniformly successful in overcoming the relaxation.

Diet.—Very much might be said upon the subject of diet in scarlet fever that would apply with equal aptness to many other forms of sickness, but alimentation in scarlet fever is, or ought to be, a very simple matter. In extremely grave cases of the disease, I scarcely look beyond milk for the alimentary nourishment required. Milk may be plain or condensed, warm or cold, even ice-cold if preferred. It may be reënforced with diffusible stimulant, or with egg, or it may be simple but well-made ice-cream. It is fluid or dissolvable food that is needed, ripe with nourishing properties, and rendered stimulating or not, as the case may require. Milk, generally simple, but at all events to serve as a basis for other simple sick-room preparations, is all that is required. It must be plentifully supplied, and very fresh. Ice-cream, usually so palatable and acceptable to the stomach, is, in this disease, a food of unparalleled excellence. Made of pure cream, it will nourish the body as well as the body will consent to be nourished. During convalescence, farina and corn-starch gruels or puddings, and plain rice-puddings, are good. Oyster-broth I have found very acceptable, and something of an appetizer. If cod-liver oil is indicated, but cannot be tolerated, pure fresh cream of milk will answer just as well, if not better. Fruits are generally allowable, especially after exhaustive, restless nights. Lemon-juice, to regulate the action of the hepatic function, is very serviceable.

Gelatine jellies are gratefully taken, and are doubtless very nourishing. If medicine is to be taken (and here I hope that I shall not be regarded as indulging in a triviality), I have conceived quite an affection for the enticing qualities and merits of the confectioner's "soft gum-drop," both before and after the act. It serves as an efficient aid and inducement to submit to the dose.

Of course, not a shred of meat or meat-essence is allowable until all danger of kidney complication is passed, if we would lean loyally upon the side of caution. Cold water, always craved, is, in my judgment, ever permissible in plenty. If the stomach rejects water, the thirst may be assuaged with pellets of ice allowed to dissolve in the mouth, or, with very young children, teaspoonfuls of ice-water very often administered. In the throat complication, the grateful impression of ice-water swallowed is a very noticeable fact, and may be regarded as a remedial adjuvant.

Isolation.—The separation of the sick from the well, as soon as the disease is recognized, is manifestly of great importance in limiting the spread of the disease. That can be done more or less effectually, according to the means and social privileges of the parents or guardians of the patients.

Scarlet fever invaded my family during the past winter. The disease was recognized first in a boy of three years of age. All the rest of the children (four) were sent immediately away. In about twenty-four hours the drooping and other characteristic symptoms were observed in a little girl of less than five years, and she was returned to her home.

A boy of nearly nine years of age, a girl of between six and seven, and an infant of less than four months, were kept absent from home nine weeks, and escaped infection.

The sickness ran a very severe course in both cases, but terminated in recovery. I cannot doubt but that the exemption from sickness enjoyed by the others was due to their prompt and perfect isolation.

Disinfection cannot be too often or too freely practised by every available means. Carbolic spray cast about the room and passages, also thrown upon the person of each and every attendant almost hourly, gives comforting assurance of the de-

struction of the infinitesimal germs of the disease floating about the apartment, and lodging anywhere so as to be portable and pernicious. Clothing destined for the wash ought to be dropped into water before leaving the sick-room, and the water will readily quench poisonous germs if a sufficient quantity of the solution of the *liqueur de Labarraque* is mingled with it. Commode-vessels ought to be liberally supplied with the same solution. Fresh, pure air is a disinfectant of no insignificant value. Its generous admission into the sick-room is a prime necessity from the beginning to the end of the disease. In houses occupied by one family, I believe the main door of the sick-room ought always to be left partly open. A current of air is thus established commonly in the direction from the door to the chimney-opening, with obvious good results, and no drawbacks worthy of mention. With little difficulty or expense, the sick-room can be supplied with an adjustable and very efficient ventilating apparatus for the window, which I have tested to my entire satisfaction. I refer to Maine's patent, sold by Underhill & Co., No. 95 Duane Street, New York City. I purchased one at the beginning of the sickness referred to in my family, which occurred during the coldest part of an exceptionally cold winter, and used it constantly day and night. The air of the room (both patients occupied the same room) was always so remarkably pure that it was a constant subject for observation on the part of those who were admitted. Drs. James B. Kissam, Leaming, Jacobi, Moses, Davis, and other medical friends, who saw my home patients in council, were each impressed with this fact, and yet the temperature was never allowed to vary two degrees above or below 70° Fahr. for three months.

As often as I have seen this ventilating apparatus in the windows of halls, and offices, and places of public assembly, I have never seen it elsewhere than in my own house in the private sick-room. I heartily commend it to your favorable attention as a supplementary means for efficiently regulating the temperature and purity of the air in the private sick-apartment. Of course, every care should be taken to avoid needlessly vitiating the air of the room.

Oxygen Gas.—I would also advocate the use of this element.

Indeed, I would enthusiastically commend its use as a remedial measure in scarlet fever. Dr. Andrew H. Smith, in his prize essay on "Oxygen Gas as a Remedy in Disease," has given us evidence of great force and value relating to its general applicability in wasting diseases. Dr. Smith had no facts at his command, however, more remarkable than some within my own knowledge, relating to the recuperative and sustaining value of this remedy in scarlet fever, diphtheria, and other allied maladies depending upon blood-poisoning.

In some extremely critical cases of scarlatina maligna, I have observed the seeming paradox that its action upon the system accommodates itself to the state of undue elevation as well as to that of undue depression. It has proved itself, to my mind, to be an agent wedded to the happy medium of systemic force and excitement, and as capable of modifying favorably one extreme condition as the other. I have no hesitation in using it now as a potent auxiliary in the stage requiring depressing measures, and as an equally potent auxiliary in the stage requiring "building up" or supporting measures.

It will tranquillize in one stage and energize in the other. In a surprisingly short time, with the free use of the gas, I have seen the pulse brought down from high levels to very nearly the normal standard of health; and in the same subject, at another time, the pulse small, thready, feeble, and slow, would quickly be sent up to its normal range and volume. Under these circumstances, it is surely right and proper to enter upon its use at a very early period in scarlet fever, and to continue its use throughout the whole period of the sickness.

I have never seen a case succumb to the blood-poisoning wherein this element has been used. In conjunction with fresh air, freely admitted, it seems to leave us little else to desire with regard to favorable surroundings and wholesome tendencies. The investigations of Beddoes, if they did much toward toning down the extravagant hopes entertained of oxygen gas, did, nevertheless, establish the fact that, as a therapeutic agent, it meets precisely many indications that could be reached by no other known means. Food and drink are not so essential in some stages of the toxicohæmic diseases as oxy-

gen, whether received in limited supply through the medium of the atmospheric air, or in liberal supply from the gas-tank.

Some of the experiments made upon animals, with a view to correcting induced abnormal conditions very accurately resembling characteristic conditions in scarlet fever, and other diseases, have proved its great value as a therapeutic agent.

It is also a positive antiseptic. In every one of Dr. Smith's cases, I find some conditions radically analogous to conditions that I have encountered in cases of scarlet fever. Where oxygen gas has been so supremely useful in remedying these grave conditions in certain forms of disease, it can scarcely fail to be operative in others. In cases of scarlet fever, I have rarely seen any occasion for limiting the use of the gas. A little irritation to the respiratory organs it was easy to obviate by the same means adopted in controlling the too great shock of cold when applied to the head. In the case of the ice-cold to the head, you remember, I created a frigorific atmosphere in the neighborhood of the head. So in the case of the gas, if direct inspiration creates irritation and nervous excitement, I would simply discharge the gas into the atmosphere immediately surrounding the head and shoulders of the patient. I would fill the bag from the cylinder, and then by pressure, between the fingers, upon the rubber tube, would partially control the escape of the gas. Then I would whirl the loose extremity of the tube in a circle around the head, impregnating with the gas every part of the adjacent atmosphere. The effect of this method was in all cases perfectly satisfactory, and gave rise to other obvious benefits than the one particularly referred to.¹

It is very clear to my mind that, if we desire to seek "euthanasia," our purpose would be almost diametrically opposed by resorting to the use of oxygen gas.

In advanced convalescence, I find an excellent article for lavatory purposes to be the "toilet carbolic soap" of Buchan. It is soothing and softening to the skin, and creates an agreeable cleanly odor about the person. I like, also, for an appro-

¹ I might mention that the sustaining and mildly exhilarating effects upon the nurses about the bedside were always very noticeable, acting thus favorably upon their jaded spirits, and reacting favorably upon the patients.

priate tonic medicine, at once efficient, and not likely to be loathed or rejected by young children, the well-known "chemical food," so called, the compound syrup of the phosphates of iron, lime, potassa, and soda.

It is a good and useful combination, and in my practice has, in these cases, been all that I could desire as an agreeable and efficient tonic recuperant.

Simple and benign cases of scarlet fever ought to be treated with simple and benign agents. Under all circumstances (according to Chomel, Charité, Hôtel Dieu), "treatment ought to be rational or symptomatic, regulated by common-sense and experience."

We may reasonably hope that the treatment of the graver cases of this dire disease will soon become more uniform, more exact in its application, and more prompt and positive in its beneficial results.

